



Air terminal devices

Grilles

TROX GmbH

Heinrich-Trox-Platz
47504 Neukirchen-Vluyn
Germany

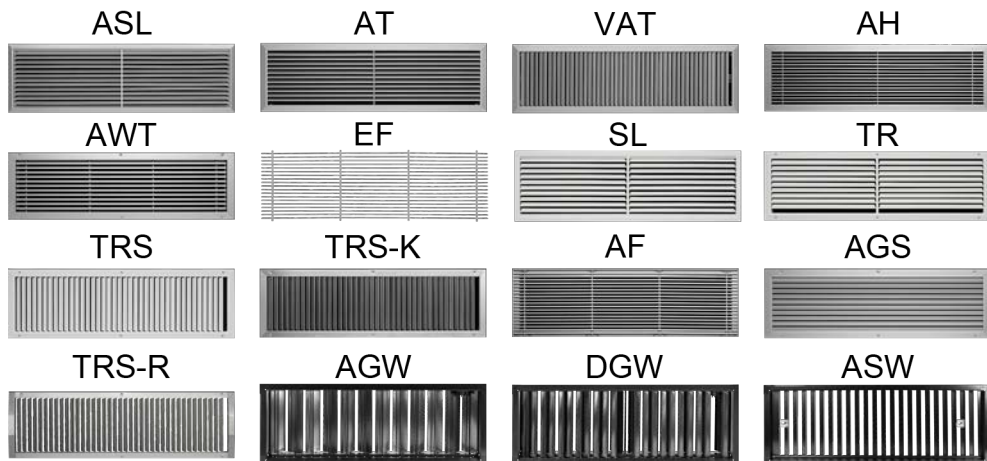
Phone: +49 (0) 2845 2020

+49 (0) 2845 202-265

E-mail: trox@trox.de

<http://www.troxtechnik.com>

Product overview



This manual describes the following ventilation grilles:

- **Installation into walls, sills or rectangular ducts:** ASL, AT, VAT, AH, AWT, EF, SL, TR, TRS, TRS-K
- **Floor installation:** AF
- **Door installation:** AGS
- **Installation into circular ducts:** TRS-R
- **Volume flow rate balancing:** AGW, ASW, DGW
- **Installation subframes** ER, EF
- **Attachments:** -AG, -AS, -D, -DG, -RD, -RS, -R5, -KD, -KS, -K5

Important notes

Information on the installation manual

This manual enables operating or service personnel to correctly install the product described below and to use it safely and efficiently.

It is essential that these individuals read and fully understand this manual before starting any work. The basic prerequisite for safe working is to comply with the safety notes and all instructions in this manual.

The local regulations for health and safety at work and general safety regulations also apply.

Qualified staff

Specialist personnel

Specialist personnel are individuals who have sufficient professional or technical training, knowledge and actual experience to enable them to carry out their assigned duties, understand any potential hazards related to the work under consideration, and recognise and avoid any risks involved.

Limitation of liability

The information in this manual has been compiled with reference to the applicable standards and guidelines, the state of the art, and our expertise and experience of many years.

The manufacturer does not accept any liability for damages resulting from:

- Non-compliance with this manual
- Incorrect use
- Operation or handling by untrained individuals
- Unauthorised modifications

The actual scope of delivery may differ from the information in this manual for special constructions, additional order options or as a result of recent technical changes.

Personal protective equipment

Personal protective equipment must be worn for any work in order to reduce health or safety hazards to the minimum.

The appropriate protective equipment for a job must be worn for as long as the job takes.

Industrial safety helmet



Industrial safety helmets protect the head from falling objects, suspended loads, and the effects of striking the head against stationary objects.

Protective gloves



Protective gloves protect hands from friction, abrasions, punctures, deep cuts, and direct contact with hot surfaces.

Safety shoes



Safety shoes protect the feet against crushing, falling parts, and slipping on slippery ground.

Correct use

Air terminal devices are used for the ventilation of rooms in industrial and comfort areas. The air terminal devices are connected to a supply air or extract air system (by others), which is typically connected to an air handling unit.

Air terminal devices supply cold or warm air to rooms (within the stated supply air to room air temperature differences).

Installation, operation and maintenance may have to meet increased hygiene requirements for certain areas of application.

The installation of air terminal devices in humid rooms, areas with potentially explosive atmospheres or rooms with dust-laden or aggressive air has to be assessed for each individual case.

Transport and storage

Delivery check

Upon delivery, carefully remove the packaging and check the unit for transport damage and completeness. In case of any damage or an incomplete shipment, contact the shipping company and your supplier immediately. Put the product back into its packaging after the delivery check to protect it from dust and contamination.



Fixing and installation material

Fixing and installation material is not part of the supply package (unless stated otherwise), but has to be provided by others; it has to be suitable for the installation situation.

Transport on site



CAUTION!

Danger of injury from sharp edges, sharp corners and thin sheet metal parts!

Sharp edges, sharp corners and thin sheet metal parts may cause cuts or grazes.

- Be careful when carrying out any work.
- Wear protective gloves, safety shoes and a hard hat.

Please note:

- Be careful when unloading or moving the product, and pay attention to the symbols and information on the packaging.
- If possible, take the product in its transport packaging up to the installation location.
- Use only lifting and transport gear designed for the required load.

- Always secure the load against tipping and falling.
- Do not move bulky items just by yourself. Get help to prevent injuries and damage.

Storage

Please note:

- Store the unit only in its original packaging
- Protect the unit from the effects of weather
- Protect the unit from humidity, dust and contamination
- Storage temperature: –10 to 50 °C
- Relative humidity: 95 % max., non-condensing

Packaging

Properly dispose of packaging material.

Assembly

General information

Personnel:

- Specialist personnel

Protective equipment:

- Industrial safety helmet
- Protective gloves
- Safety shoes

Installation note:

- Fix the product only to load-bearing structural elements.
- Load suspension systems only with the weight of the product. Adjacent components and connecting ducts must be supported separately.
- Use only approved and adequately sized fixing material (fixing material is not included in the supply package).
- The air terminal devices must remain accessible for cleaning even after installation.
- Installation and sealing material which the manufacturer provides is usually supplied in an extra bag.

Before you install the product, take suitable precautions to protect air distribution components from contamination during installation (VDI 6022). If this is not possible, at least cover the product or take other precautions to protect it from contamination. In this case you have to ensure that the product cannot be started. Ensure that all components are clean before you install them. If necessary, clean them thoroughly. If you have to interrupt the installation procedure, protect all openings from the ingress of dust or moisture.

Dimensions and weight

Dimensions, weights and free areas are given in the technical leaflets.

Installation opening for a ventilation grille

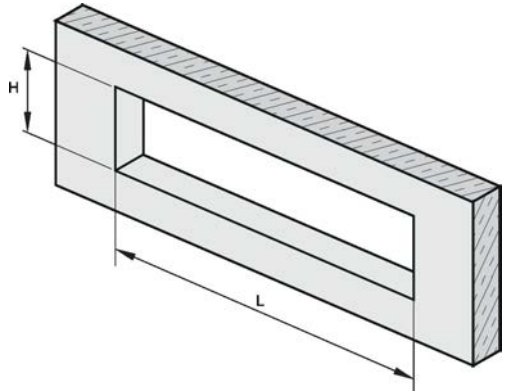


Fig. 1: Installation opening

Installation opening with installation subframe

L = Grille length to be ordered

H = Grille height to be ordered

Installation opening without installation subframe

L = Grille length to be ordered - L= 15 mm

H = Grille height to be ordered - H= 15 mm



Installation opening for AGS and AGS-T

The installation openings for grilles AGS and AGS-T differ from the dimensions given here; see Dimensions 7

Installation into walls, sills or rectangular ducts

Installation subframe

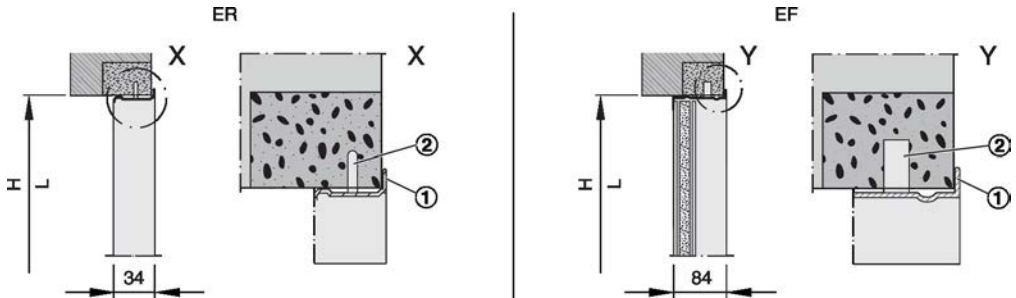


Fig. 2: Installation subframe ER / EF

- ① Installation subframe
- ② Fixing tab

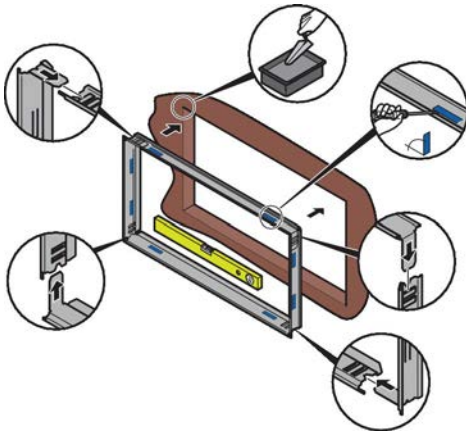


Fig. 3: Installation subframe ER

Installation subframe (ER)

- The installation subframe consists of four sections
- Push the sections together
- For wall installation: Spread the fixing tabs, then mortar them in
- Alternatively: Countersunk holes are provided for fixing the frame with screws or rivets to different structures

Installation subframe with filter casing (EF)

- For wall installation: Spread the fixing tabs, then mortar them in
- Alternatively: Countersunk holes are provided for fixing the frame with screws or rivets to different structures

Fitting the seal

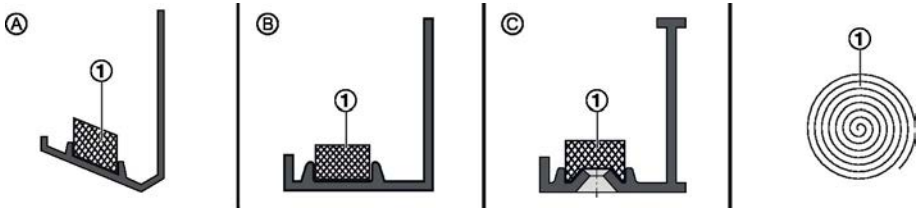


Fig. 4: Fitting the seal with glue

- Ⓐ AT, ASL, AR, AE, GLB
- Ⓑ AH

- Ⓒ AGS
- ① Seal (part of the supply package)

Fixing of ventilation grilles

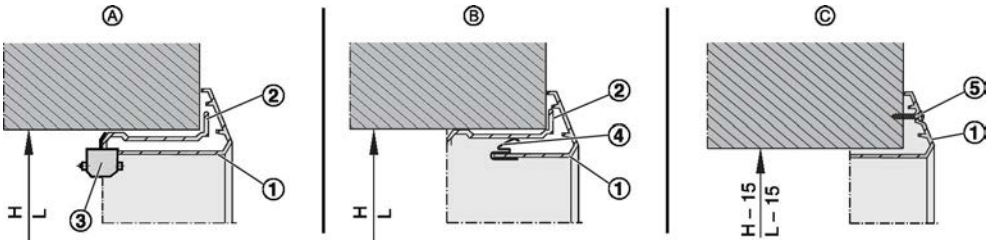


Fig. 5: Ventilation grille fixing

- Ⓐ With concealed screw fixing
- Ⓑ With spring clip fixing
- Ⓒ With screw fixing
- ① Grilles

- ② Installation subframe
- ③ Concealed screw fixing
- ④ Spring clip
- ⑤ Fixing screw (by others)

Concealed screw fixing Ⓐ	Spring clip fixing Ⓑ	Screw fixing Ⓒ
ASL, AT, VAT, AH, SL, TR, TRS	ASL, AT, VAT, AH	AT, VAT, AH, AWT, TR, TRS, TRS-K, TRS-R
Only with installation subframe ER	With installation subframe ER or installation subframe with filter casing EF	Countersunk holes are provided for fixing the frame with screws or rivets to different structures
When installing in ceilings or vertical openings, secure the grille using safety cables (on site) to rule out the possibility of the grille falling down.	Do not install in ceilings or vertical openings.	

Fixing of AGS ventilation grilles

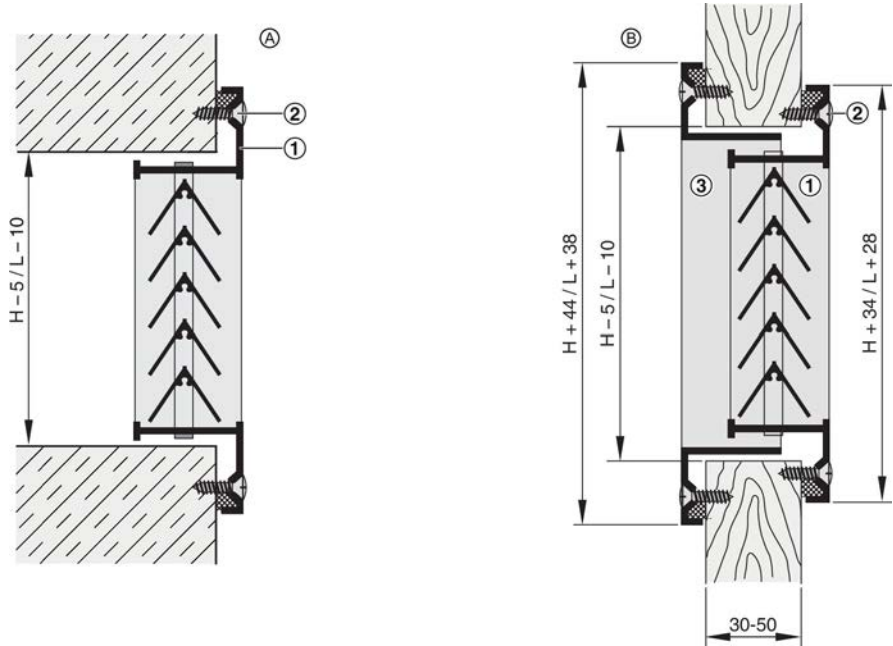


Fig. 6: Ventilation grille AGS

- Ⓐ Ventilation grille AGS with screw fixing, without installation subframe
- Ⓑ Ventilation grille AGS-T with screw fixing and matching rear frame
- Ⓒ Grilles
- Ⓓ Fixing screw (by others)
- Ⓔ Matching rear frame

Installation

- Preferably for wall and door installation
- Installation with or without installation subframe
- Fix the front frame with screws
- AGS-T: Fix the matching rear frame with screws

Fixing of TRS-R ventilation grilles

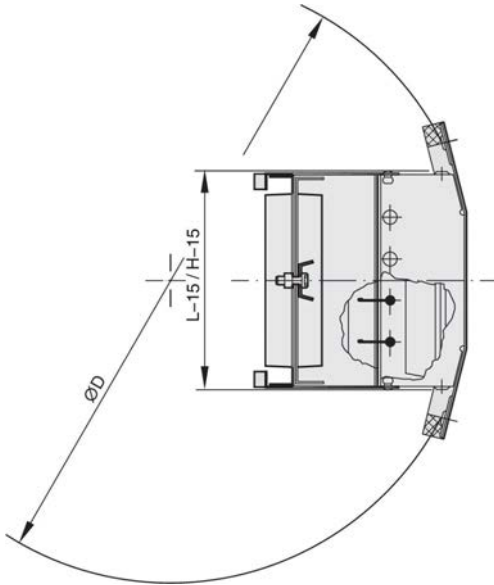


Fig. 7: TRS-R

Duct attachment kits AGW, DGW, ASW

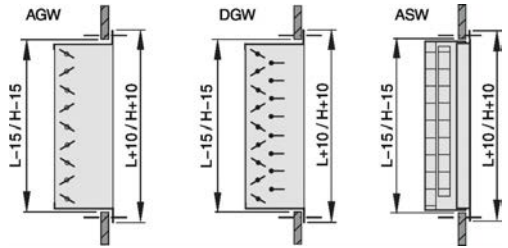


Fig. 9: Installation

Installation

- Preferably for installation into rectangular ducts
- Drill holes into the frame and duct
- Fix the frame with screws or rivets

Circular duct dimensions

Nom- inal height	Variant	ØD	
		Minimum [mm]	Maximum [mm]
75	TRS-R	150	400
75	TRS-R-R5 from L = 825 mm	224	400
125	All	300	900
225	All	600	2400

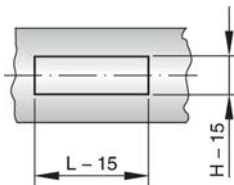


Fig. 8: Installation opening

If the grille is installed into a spiral duct of a larger diameter, the duct seams should be riveted

Horizontal runs

AH

Note:

E = Length of end sections to be ordered

H = Height grille to be ordered

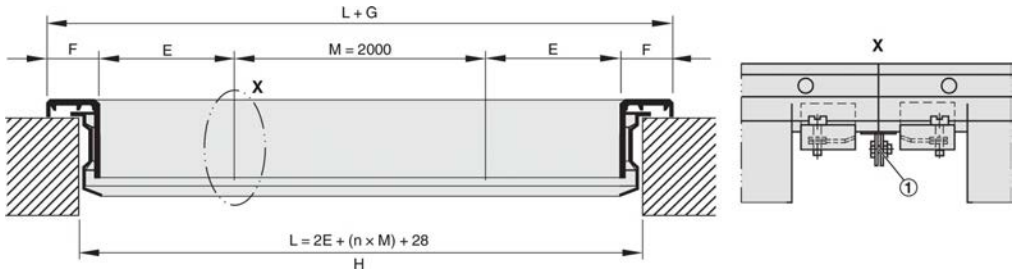


Fig. 10: AH, horizontal run sections with butt joint

- ① Joined installation subframes, screw fixed
- AH/C1: F = 28 mm, G = 28 mm
- AH/D1: F = 20 mm, G = 12 mm

SL

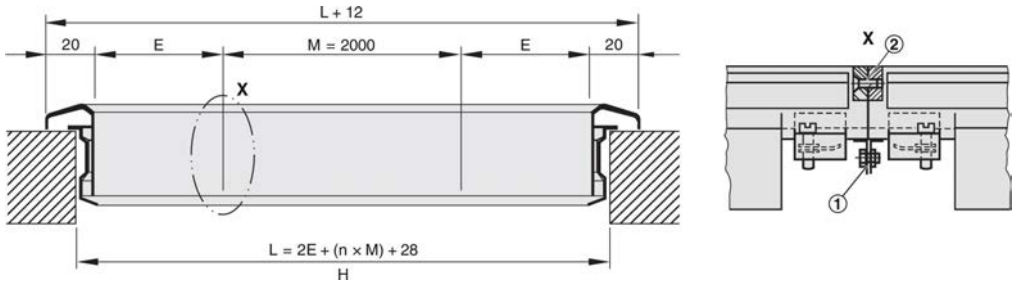


Fig. 11: SL, horizontal run sections with butt joint

- ① Joined installation subframes, screw fixed
- ② Joined ventilation grilles

Installation steps:

- Join the installation subframes (screw-fixing)
- Join the ventilation grilles (screw-fixing)

Floor installation

AF

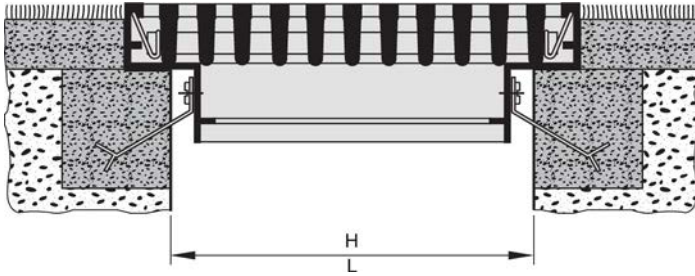


Fig. 12: AF installation

Installation

- Preferably for floor installation
- Installation subframe to be mortared in with fixing tabs
- The grille should be flush with the floor as otherwise there is a risk of people falling
- Install grilles in such a way that they will not move when someone steps on them

AF continuous horizontal run

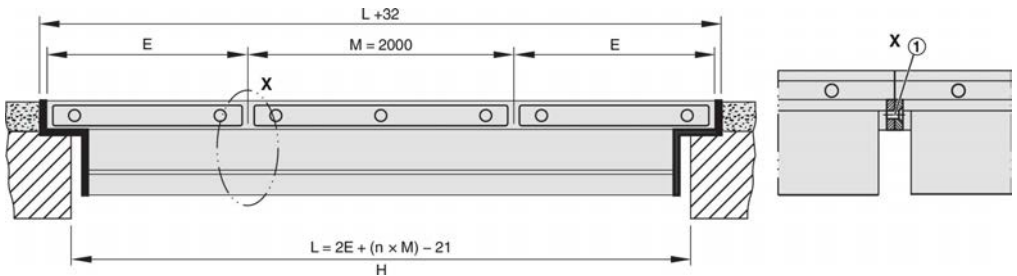


Fig. 13: AF, horizontal run sections with butt joint

- ① Joined ventilation grilles

Duct connection

Ventilation grilles are not fitted with a spigot or flange as they are installed into ducts or other openings.

Initial commissioning, maintenance and cleaning

Initial commissioning

Before you start commissioning:

- Check that the grilles are correctly seated.
- Remove protective film, if any.
- Ensure that all grilles are clean and free from residues and foreign matter.
- Ensure that the devices have been correctly fixed and connected to the ducting.

For commissioning see also VDI 6022, part 1 – 'Hygiene requirements for ventilation and air-conditioning systems and units'.

Volume flow rate balancing

When several grilles are connected to just one volume flow controller, it may be necessary to balance the volume flow rates.

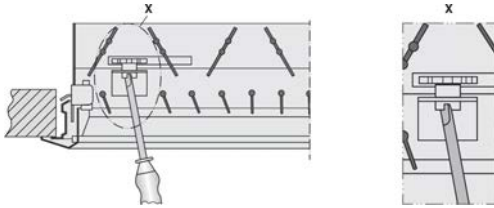


Fig. 14: Attachments -AG, -DG and Types AGW, DGW

Damper unit with opposed action blades, adjustable

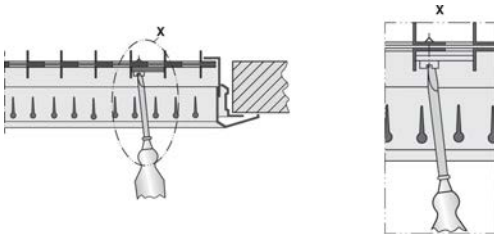


Fig. 15: Attachments -AS, -S and Type ASW

Damper unit with hit and miss damper, adjustable, secured with a locking screw

Air pattern

Adjustable blades: Set the air control blades individually or together and depending on the local conditions

Variants -D, -DG: Air control blades, fitted at 90° to the front blades, can be adapted to the local conditions

Maintenance and cleaning

Please note:

- The cleaning intervals given in the VDI 6022 standard apply.
- Clean surfaces with a damp cloth.
- Use only common household cleaners, do not use any aggressive cleaning agents.
- Do not use cleaning agents that contain chlorine.
- Do not use equipment for removing stubborn contamination, e.g. scrubbing sponges or scouring cream, as it may damage the surfaces.

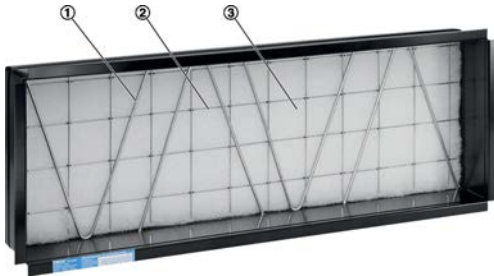
Filter change for ventilation grilles with a filter (EF installation subframe)

Fig. 16: Changing the filter

Ordering filters

Use the following order code(s) to order coarse dust filters FMP-G4-C11 (filter class G4 / EN 779):

- F711 - Roll media, 2 m wide
 - Cut-to-size pads (minimum order quantity: 5 pads)

1. ▶ Remove the ventilation grille.
2. ▶ Remove the metal angled support rod (Fig. 16/1) and the front support wire (Fig. 16/2).
3. ▶ Pull out the contaminated filter (Fig. 16/3) and dispose of it.
4. ▶ Insert the new filter.
5. ▶ Put the support wire, metal angled support rod and ventilation grille back into place.

